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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,376

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EXAMINER

BLEVINS, JERRY M

ART UNIT

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2883

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,376	Applicant(s) DE BARROS ET AL.	
	Examiner JERRY BLEVINS	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/30/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by US 6,865,316 to Pratt.

Regarding claim 1, Pratt teaches an optical device (Figure 3) for transforming the propagation mode of optical signals, comprising at least a first mode converter, associated with a multimode fiber (18), the first converter being supplied with signals that are propagated in accordance with a first guided mode (31) and delivering those signals in the multimode fiber partly in the first guided mode and partly in a second guided mode (32) of a higher order than the first, characterized in that the multimode fiber comprises at least first passive filtering means (grating 16, column 4, lines 8-28) which are arranged to convert the first guided mode into at least one dissipative cladding mode (33) in order to prevent or limit the propagation of the signals in this first guided mode while at the same time authorizing the propagation of the signals in the second guided mode in the multimode fiber (column 4, lines 8-28).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pratt.

Regarding claim 3, Pratt teaches the limitations of the base claim 1. Pratt does not teach second passive filtering means arranged to convert a third guided mode, of a higher mode than the first, into at least one dissipative cladding mode in order to prevent or limit the propagation of the signals in the third guided mode while at the same time authorizing the propagation of the signals in the second guided mode in the multimode fiber. However, this modification would appear to examiner to merely require a duplication of parts, as the second filtering means would serve the same function respective to the third guided mode as the first filtering means serves respective to the first guided mode. As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the second filtering means to the device of Pratt. {See MPEP 2144.04 VI B. Duplication of Parts, In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)}. The motivation would have been to increase the utility of the device.

Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pratt in view of US 6,385,368 to Amundson et al.

Regarding claims 2 and 4, Pratt teaches and renders obvious the limitations of the base claims 1 and 3, respectively. Pratt also teaches that the filtering means are produced in the multimode fiber in the form of long period gratings (column 4, lines 8-28). Pratt does not teach

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that the period of the gratings is selected as a function of the dissipative cladding mode.

Amundson teaches a long period grating wherein the period of the grating is selected as a function of a dissipative cladding mode (column 3, lines 54-65). It would have been obvious to one of ordinary skill in the art at the time of the invention to select the period of the grating of Pratt as a function of the dissipative cladding mode, as taught by Amundson. The motivation would have been to improve attenuation (column 3, lines 54-65).

Allowable Subject Matter

Claims 5-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 5, the prior art, taken individually or in combination fails to disclose or render obvious a cladding having an outside radius whose value at the first and/or second filtering means is lower than the value on each side of those first and/or second filtering means.

Regarding claim 6, the prior art, taken individually or in combination fails to disclose or render obvious that the first and/or second long period grating(s) exhibit(s) a variation in the period in order to ensure broadband filtering,

Regarding claim 7, the prior art, taken individually or in combination fails to disclose or render obvious that the first and/or second long period grating(s) exhibit(s) an index modulation profile over a selected length in order to provide spectral filtering of substantially rectangular shape.

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Regarding claims 8-10, the prior art, taken individually or in combination fails to disclose or render obvious that downstream of the first and/or second filtering means, a second mode converter is arranged to convert into the first mode the second mode of the signals that are propagated in the multimode fiber which supplies it.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JERRY BLEVINS whose telephone number is (571)272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jerry M Blevins/
Patent Examiner, Art Unit 2883
FGF/jmb
05/04/2009

/Frank G Font/
Supervisory Patent Examiner, Art Unit 2883